

Town of Exeter, NH
Stormwater and
Wastewater Collection System
Asset Management Program

November 23, 2020

Overview

- Introductions
- NHDES Asset Management Assistance
 - \$60,000 principal forgiveness
- Asset management work completed prior
 - 2002 Water/Wastewater/Stormwater GIS Development
 - 2008 – PeopleForms Work Order Tracking
 - 2014 - Public Water System Asset Management Plan
 - 2019 - PeopleGIS Asset Management Module Implementation
 - 2020 - Water System Asset Management Plan – Vertical Assets
 - 2020 - Wastewater Treatment Facility Asset Management Plan

Asset Management Goals

- Understand the condition of the Town's infrastructure.
- Identify and correct current deficiencies.
- Anticipate future needs.
- Provide a basis to estimate financial resources required to maintain, rehabilitate and replace assets as necessary.
- Continue to build on the Asset Management Program in the future.

Asset Management Components

- Vision Statement
- Asset Inventory and Condition Assessment
- Level of Service Goals
- Critical Assets and Priority Projects
- Minimum Life Cycle Costs (Practices)
- Long-term Funding Strategy (Budget)
- Implementation Plan
- Communication Plan

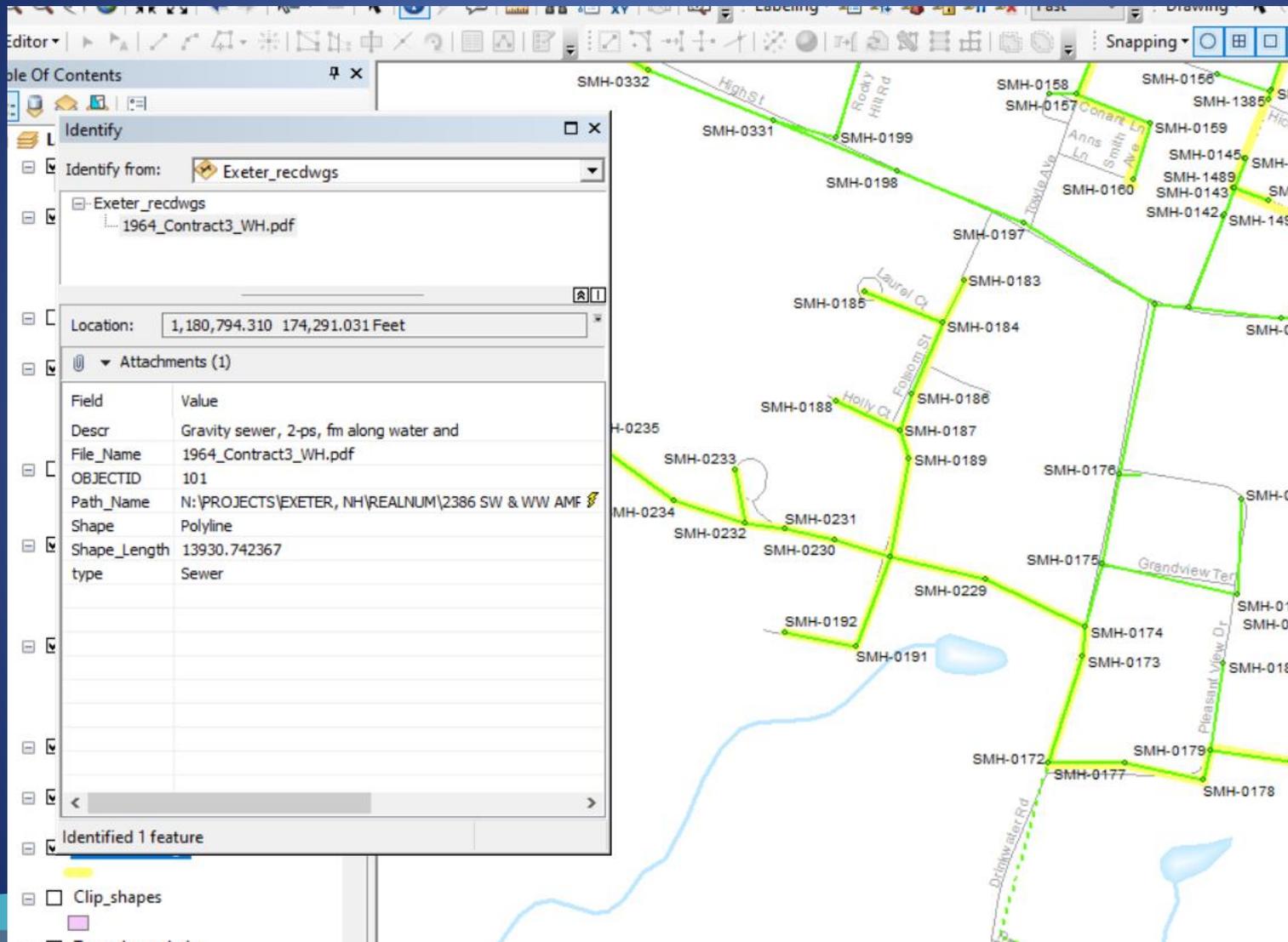
Vision Statement

- "Integrate data sources and leverage available information to coordinate and streamline reporting, decision-making and optimize system performance."
- In plain English: Tame the Data!
- Town uploaded over 5000 files
 - GIS Files
 - Record Drawings
 - Exported Spreadsheets
 - Tie Sheets

Tame the Data

- Unique Asset Identification Numbers
- Correct/Update Mapping
- Create resources and tools
 - Map books (pdf)
 - Financial planning spreadsheets
 - ArcGIS files and tools
 - Mapped record drawings and tie sheets

Example File - Record Drawing



Level of Service

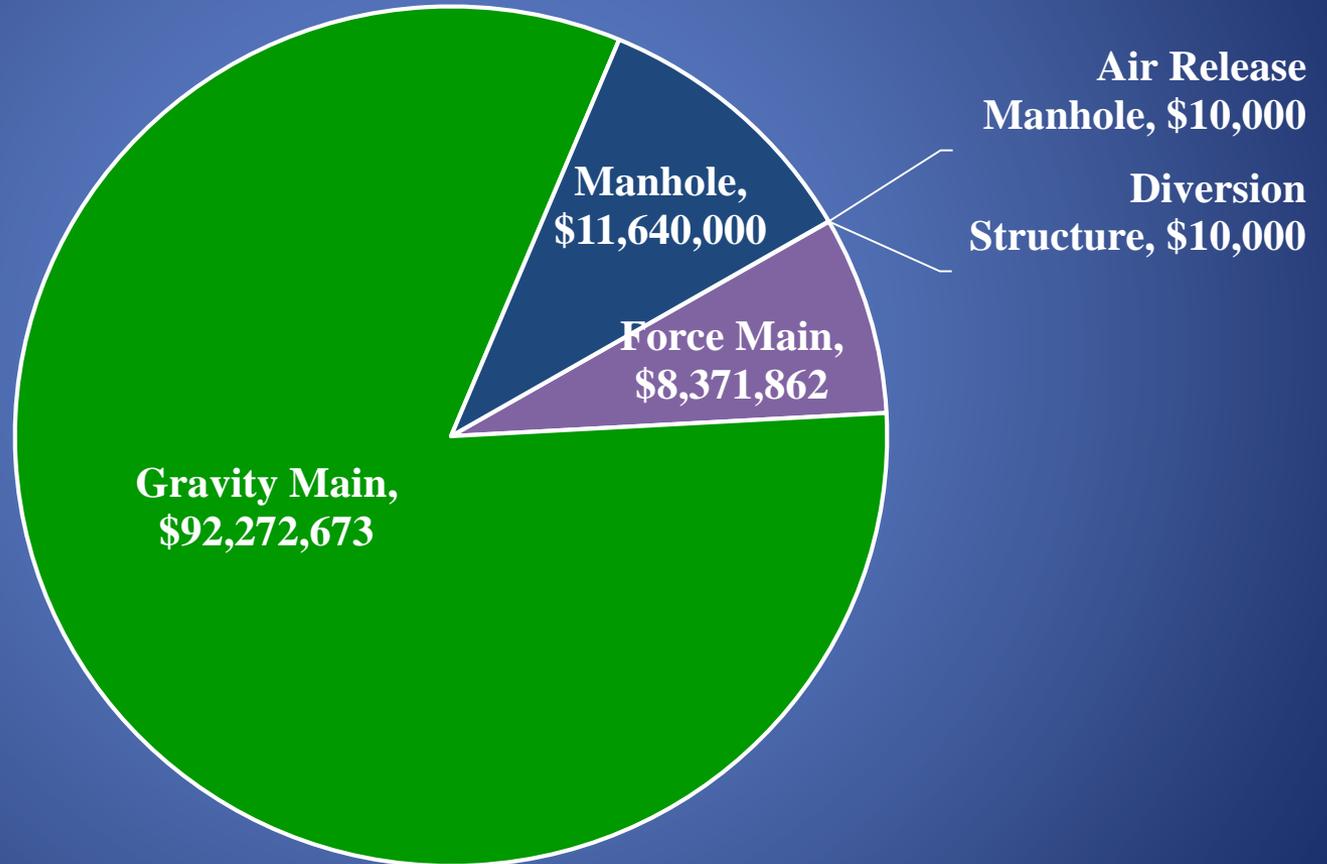
- Timely response to customer concerns.
 - Adequate staffing – including training
 - Consistent process and adequate follow up
- Actions that ensure reliable service
 - Sewer – minimize breaks, back-ups
 - Stormwater – minimize local flooding, sink holes
- Actions that ensure adequate financial resources
 - Sewer – rate setting
 - Stormwater – tax rate

Level of Service

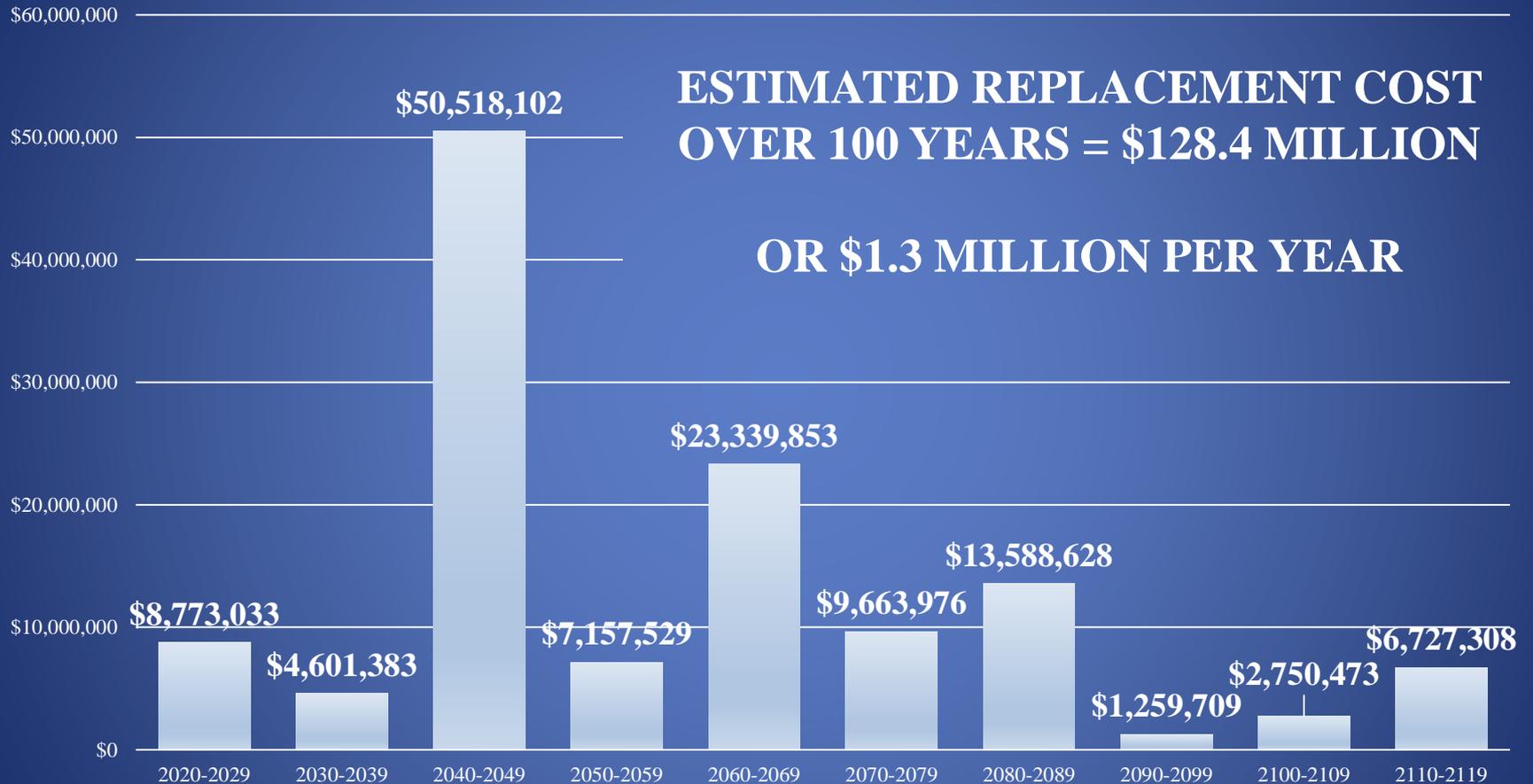
- Actions that improve data collection, integration and management
 - Periodically review asset identifiers (annually)
 - Use maintenance and inspection information to update asset inventory on a regular basis (annually)
 - Use ArcGIS to coordinate projects between departments

Sewer System

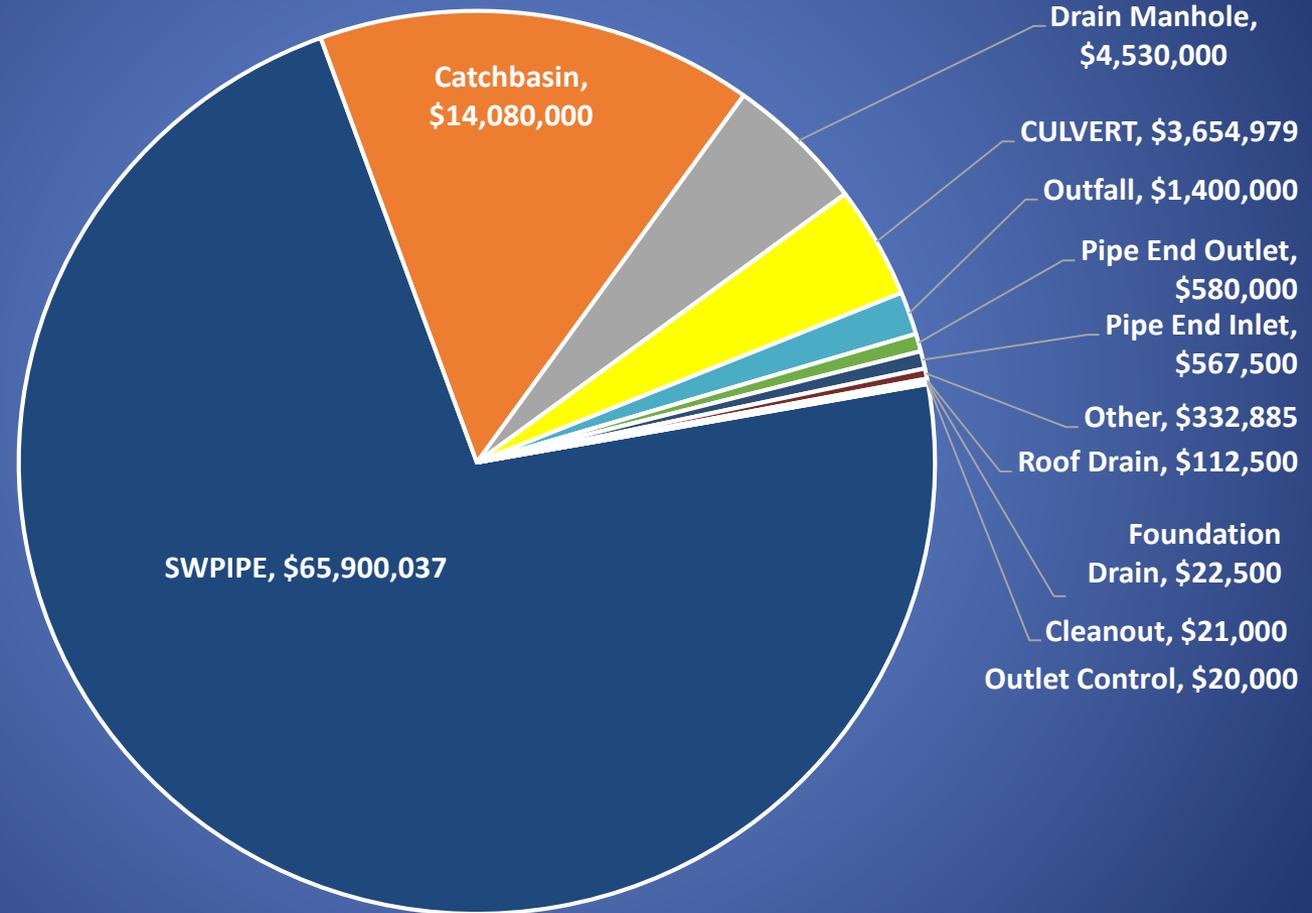
Replacement Value = \$112 Million



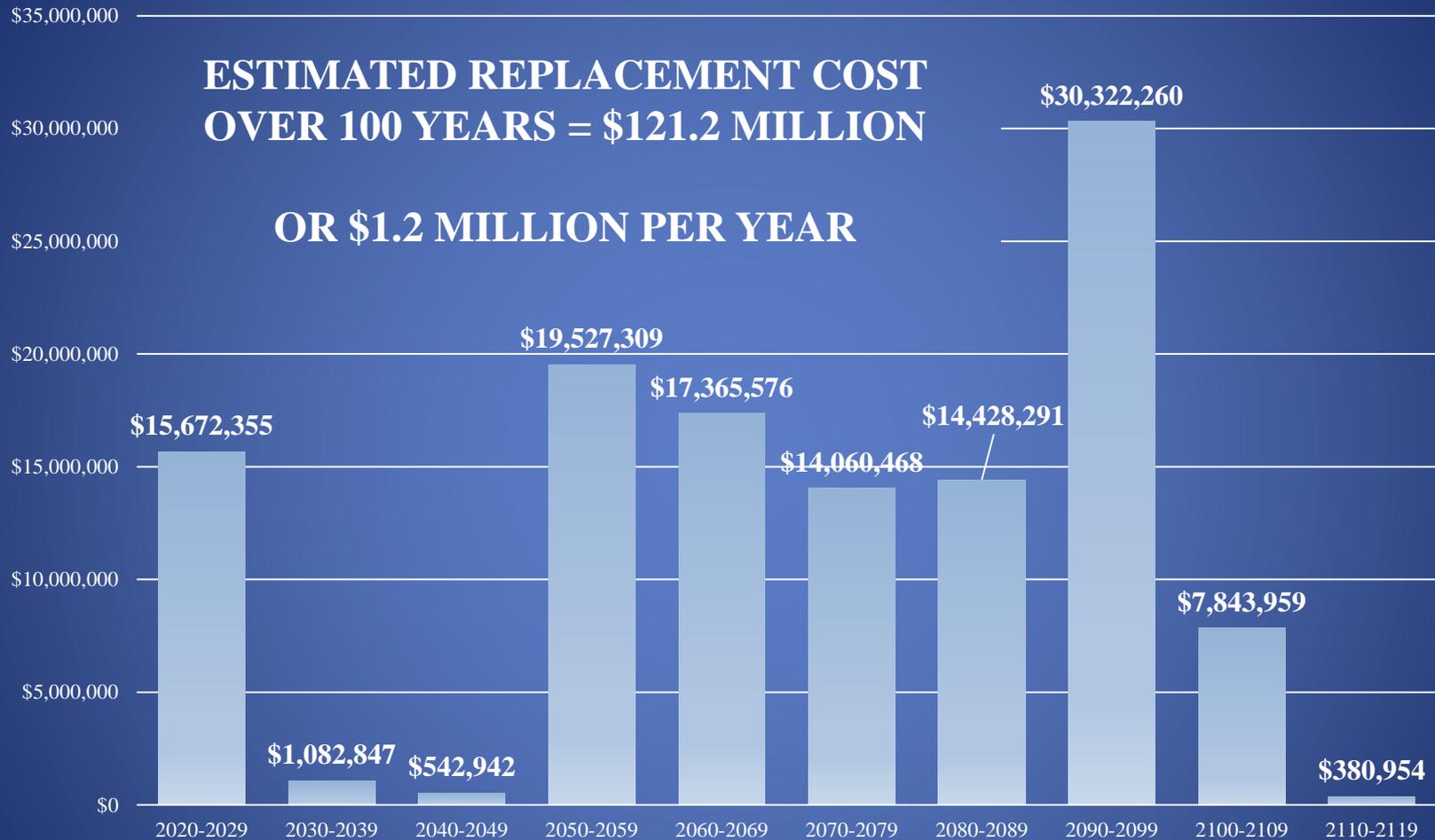
One Hundred Year Look Ahead



Stormwater System Replacement Value = \$91.2 Million



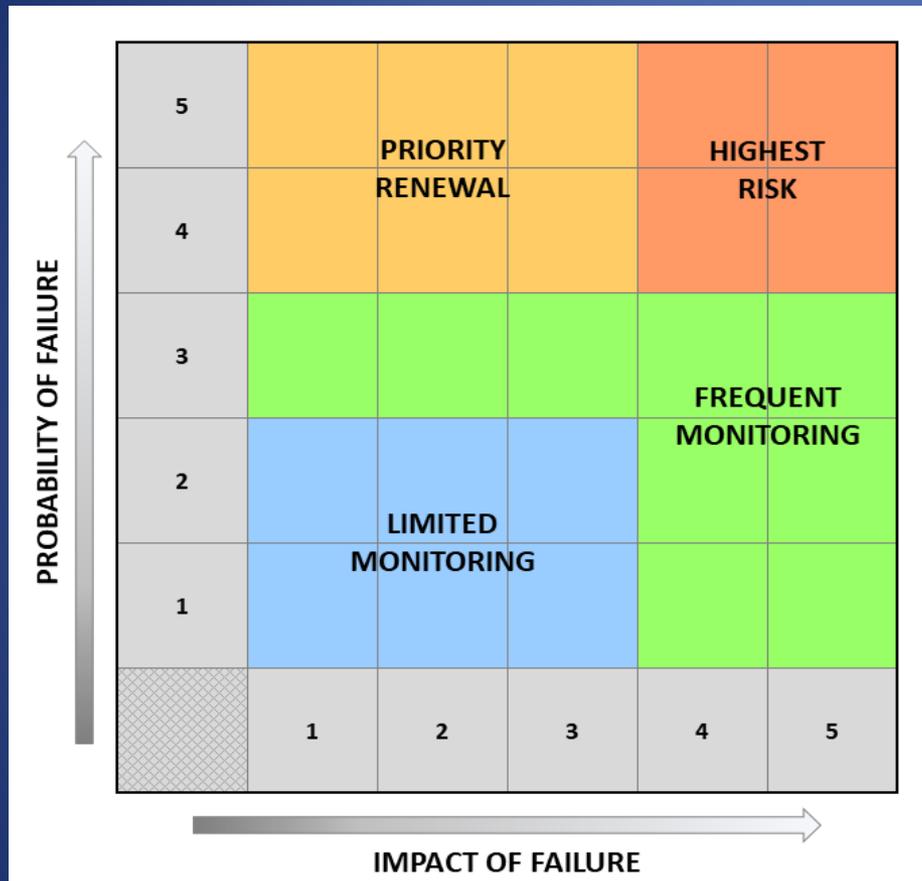
One Hundred Year Look Ahead



Critical Assets and Priority Projects

- Probability of Failure
 - Condition of asset
 - Age and material of asset
 - Capacity of asset
- Impact of Failure
 - Public health and safety
 - Water quality
 - Damage to roadway
 - Large number of customers; major customer

Critical Assets and Priority Projects



- Highest Risk
 - High Probability of Failure
 - High Impact of Failure
- Priority Renewal
 - High Probability of Failure
 - Low Impact of Failure
- Frequent Monitoring
 - Moderate Probability of Failure
 - High Impact of Failure
- Limited Monitoring
 - Low Probability of Failure
 - Low Impact of Failure

Financial Planning Sewer and Stormwater

- Annually review revenues and LOS Goals to ensure that inspection, maintenance and asset renewal needs can be met.
- Balance in-house CCTV inspections with use of specialty contractor

Financial Planning – Sewer System

- Operating budget and staffing is sufficient to complete monitoring and maintenance tasks
- Establish adequate asset renewal budget
 - Estimated annual need = \$1.3 Million
 - Based on full replacement cost
 - May come in lower
 - Proactive maintenance and repair
 - Lower cost renewal methods – CIPP lining

Financial Planning – Sewer System

- Compare Current CIP to Estimated Need
 - Current CIP (5 Years)
 - Gravity main renewals \$1.5 Million
 - Additional gravity main and sewer structure renewals approximately \$2.9 Million
 - Total of \$4.4 Million budgeted
 - Approximately \$0.9 Million per year

Financial Planning – Stormwater

- Lack of resources to complete monitoring and maintenance tasks – stormwater pipe
 - Financial resources
 - Staffing
- Establish adequate asset renewal budget
 - Estimated annual need = \$1.2 Million
 - Based on full replacement cost
 - May come in lower
 - Proactive maintenance and repair
 - CMP – shorter useful life

Financial Planning – Stormwater

- Compare Current CIP to Estimated Need
 - Current CIP (5 Years)
 - Stormwater asset renewals approximately \$2.2 Million
 - Approximately \$432,000 per year

Implementation and Communication

- Completed to date
 - Updated existing GIS files
 - Created additional GIS files
- Suggested next steps
 - Publish maps online to share with the public
 - Enhance utility of CCTV inspection software with Microsoft Access
 - Streamline coordination of pavement evaluations with utility upgrades

Additional Comments from Panelists

Questions??